

Curly-leaf pondweed *Potamogeton crispus*

Ecology: Curly-leaf pondweed is a perennial, rooted, submersed aquatic vascular plant native to Eurasia, Africa and Australia (Stuckey 1979). This species is tolerant of a wide variety of ecological conditions and can occur in both oligotrophic and eutrophic waters (Stuckey 1979). It is found in lakes, ponds, ditches, marshes and canals, and it can tolerate fresh to slightly brackish waters (Capers et al. 2005). This species reproduces predominantly through vegetative buds called “turions,” rhizomes and stem fragments (Sastroutomo 1981). Curly-leaf pondweed can remain photosynthetically active during the winter and are often the first plant to appear after ice out. They quickly form dense mats giving this species a competitive advantage over native aquatic plants (Catling and Dobson 1985 as cited by Capers et al. 2005). Unlike most aquatic plants, *P. crispus* dies back in mid summer. This senescence can result in an increase in phosphorus concentrations sometimes causing algae blooms, and a concentration of dead plants along the shore (ISSG 2006). *P. crispus* has the positive effect in some instances of increasing oxygen levels and providing shelter for small fish and aquatic insects, which provide food for larger fish and amphibians (USDA, NRCS 2008).

Distribution: This species was first introduced to northeastern North America in 1860 (Les and Merhoff 1999). It is believed that curly-leaf pondweed was unintentionally introduced and spread through early fish stocking efforts by hatcheries. There is also evidence for deliberate planting (Les and Merhoff 1999). This species has since spread throughout the United States (Sturtevant 2008). Curly-leaf pondweed is now prevalent in the ponds and marshes of northern Utah, where it competes with native pondweeds.

Pathways of Introduction: Curly-leaf pondweed is spread by plant fragments attached to boats and equipment (Johnstone et al. 1985). It is also widely used for horticulture, as an aquarium plant and sold through biological supply houses making it readily available for unintentional or intentional release (Maki and Galatowitsch 2003).

Management considerations: Curly-leaf pondweed spreads from plant fragments, so cleaning all vegetation off boats and equipment before leaving a water body can help prevent spread (ISSG 2006). Control activities for curly-leaf pondweed are most effective in the spring or very early summer before the turions germinate. Options for control include both mechanical and chemical treatment (U.S. Army Corps of Engineers 2004). The U.S. Army Corps of Engineers suggests the use of benthic barriers to control small, high use areas such as boat ramps and docks. Though these methods can be effective, they are too expensive for larger applications. Harvesting can also be used in smaller areas where curly-leaf pondweed is a specific nuisance, however, this may result in further spread of vegetative propagules (U.S. Army Corps of Engineers 2004).

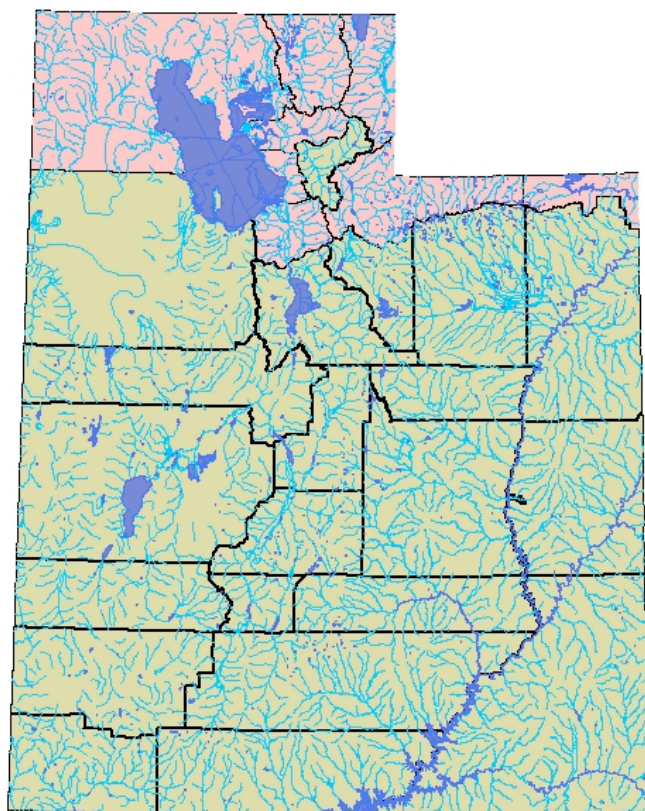
Suggested herbicides include diquat (Reward, Weedtrine-D), endothall (Aquathol, Hydrothol 191), and fluridone (Sonar A.S. or Sonar SRP). When choosing a herbicide it is important to note that diquat is not effective in turbid water and Hydrothol is considered toxic to fish. However, diquat and endothall can eliminate plants within 24 hours of exposure and fluridone requires 30 to 60 days to kill plants (U.S. Army Corps of Engineers 2004).

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Curly-leaf Pondweed

- Counties curly-leaf pondweed is present.
- Major Waterways



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USDA-NRCS PLANTS Database